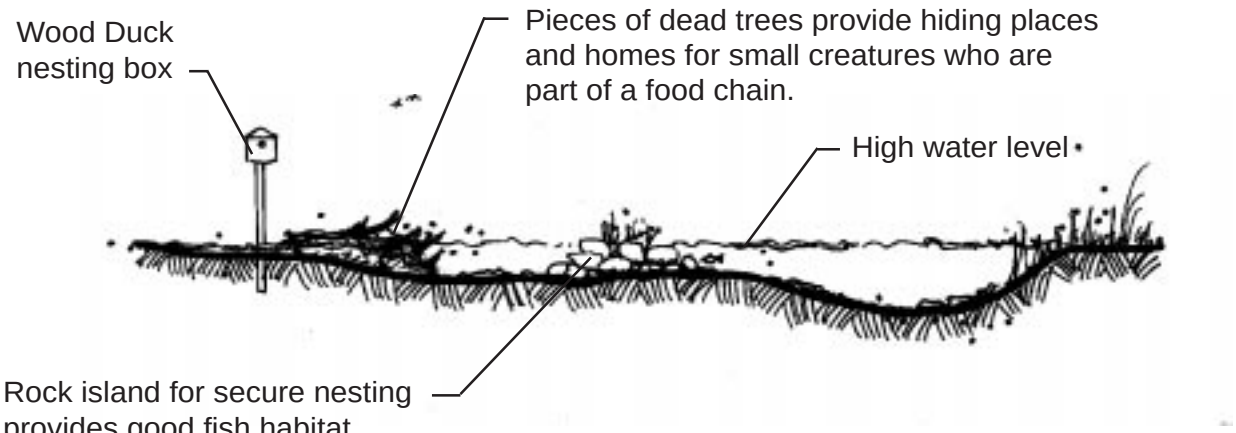
PRIMARY USE: To encourage the establishment of species indigenous to wetlands.
ADDITIONAL USES: To control storm water runoff, make aesthetic contributions to the land.

WETLAND ANIMAL HABITAT DESIGN

What is it? A transitional area between land and water that is developed to encourage the habitation of wetland species by providing habitat for feeding, nesting, breeding, and refuge.

Purpose

Enhance biological diversity of a wetland site by encouraging the establishment of various wildlife species.



Wetland Habitat Features
Section View

Limitations

Site should be 1.2 acre (0.5 ha) or larger for many desirable species. Areas smaller than 0.25 acre (0.1 ha) are not useful for this purpose. Water flow rate into the wetland should be managed. Very high rates are disruptive to resident species, as are large fluctuations in water elevation. Maintenance of the wetland systems must be carried out on a monthly and yearly basis to maintain function.

Materials

Vascular plants (reeds, bulrushes, cattails), substrate (soil, sand, gravel, organic matter). For habitat - snags (dead tree trunks installed for cavity-nesters), nest boxes and platforms (unique design for cavity-nesters), buffer trees (for foliage nesters), logs, stumps, and brush (for bird perches and small mammal refuge).

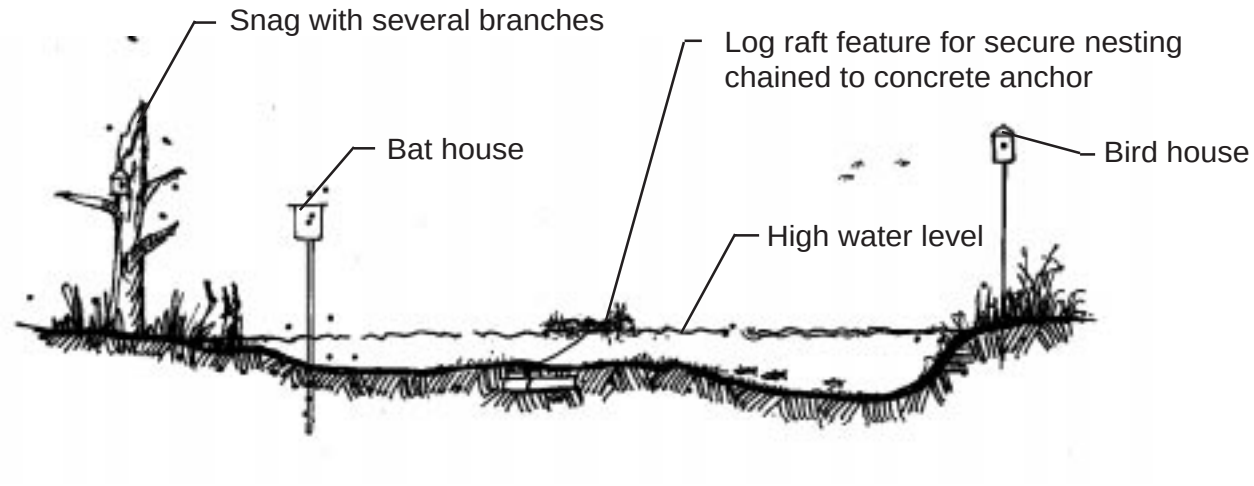
Installation

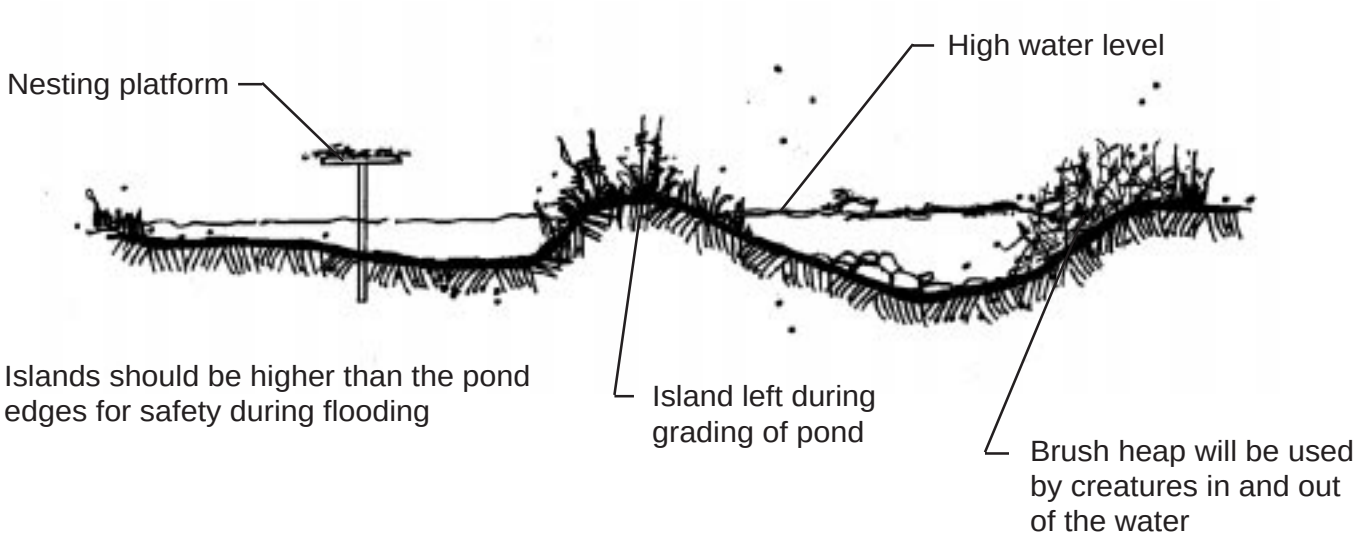
Critical factors for creation of wetlands include hydrologic analysis, sizing, siting, and design features. Meteorological factors, the nature of adjacent development, and the condition of the site must be taken into account. A hydrologic analysis should be performed to ensure adequate water to support a wetland system. Minimum size to encourage wildlife habitation is 1.2 acre (0.5 ha). Placement of the wetland habitat will be site specific but should work within the natural contours of the land and take maintenance needs into consideration. Design features that will encourage establishment of wildlife include: variable depths in the wetland, islands for nesting, creation of habitat using snags or brush, and structural features such as nest boxes and platforms.

Source: Horner Richard, *Constructed Wetlands for Urban Runoff Water Quality Control*. In: National Conference on Urban Runoff Management: Enhancing Urban Watershed Management at Local, County, and State Levels, March 30 to April 2, 1993.

WETLAND ANIMAL HABITAT DESIGN

Additional drawings and considerations:





Note: Some of these features will cause a small loss of water storage capacity; size pond accordingly.

Wetland Animal Habitat Features
Section Views

Source: Horner Richard, *Constructed Wetlands for Urban Runoff Water Quality Control*. In: National Conference on Urban Runoff Management: Enhancing Urban Watershed Management at Local, County, and State Levels, March 30 to April 2, 1993.